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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/813,304

03/31/2004

Jeong-Ho Lee

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04/17/2008

MACPHERSON KWOK CHEN & HEID LLP

2033 GATEWAY PLACE

SUITE 400

SAN JOSE, CA 95110

EXAMINER

NGUYEN, DUNG T

ART UNIT

PAPER NUMBER

2871

MAIL DATE

DELIVERY MODE

04/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/813,304	Applicant(s) LEE ET AL.	
	Examiner Dung Nguyen	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 14-17 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 14-17 and 19-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicants' amendment dated 09/14/2008 has been received and entered. By the amendment, claims 1-6, 14-17 and 19-23 are pending in the application.

Applicant's arguments with respect to claims 1 and 14 have been considered but are moot in view of the new ground(s) of rejection as follow:

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the spacer having a height larger than the protrusion must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 14-17 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda et al., US 7,224,421, in view of Sasaki et al., US 6,038,006.

Regarding claims 1-3, 14 and 21-23, Takeda et al. disclose a liquid crystal display (LCD) device (figure 52), in which a thin film transistor (TFT) array panel comprising:

- a substrate (17)
- a gate line (31)
- a gate insulating layer (40)
- a TFT having a semiconductive layer, source/drain electrode (according to an active matrix type LCD)
- a first passivation layer (protect layer 43);
- a pixel electrode (13) having a cut-out (slip 21)
- a second protrusion (20C)

Takeda et al. figure 52 does not explicitly disclose a first protrusion. Sasaki et al. figure 2 does disclose a first protrusion (34) can be formed directly over a first passivation layer (32) and

over the data bus line (23). Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to employ the Takeda et al. device having a protrusion directly formed over the passivation layer as shown by Sasaki et al. in order to obtain an excellent display characteristics (col. 2, ln. 19-20)

Regarding claims 4-6 and 15-17, Takeda et al. do not appear to explicitly specify what its auxiliary common electrode (15) overlaps. Sasaki et al. do disclose that a storage electrode (41) at least overlapping a pixel (see figure 2). Therefore, it would have been obvious to one of ordinary skill in the art of liquid crystals at the time the invention was made to modify Takeda et al. display in view of Sasaki et al. for high screen quality through controlling storage capacitance.

4. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda et al., US 7,224,421, in view of Sasaki et al., US 6,038,006, and further in view of Nonaka et al., US 6,897,918 B1

Regarding claims 19 and 20, the modification to Takeda et al. do not appear to explicitly specify a spacer having a height larger than the protrusion and disposed on the same layer as the protrusion and that the protrusion and spacer comprise an organic material. Nonaka teaches a color filter and protrusion and teaches spacers, protrusions and a spacer made of the same material as the protrusion for controlling liquid crystal alignment (Column 3, Lines 30-40). It would have been obvious to one of ordinary skill in the art of liquid crystals at the time the invention was made to modify Takeda et al. in view of Nonaka for controlling liquid crystal alignment.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DN
04/14/2008

/Dung T. Nguyen/
Primary Examiner
Art Unit 2871

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